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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------|---------------------|------------------|
| 10/797,508 | 03/10/2004 | Michael Pang-Cheng Hsu | 884.367US3 | 4011 |
| 21186 | 7590 | 02/03/2005 | EXAMINER | |
| SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402 | | | CUNNINGHAM, TERRY D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2816 | |

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|-----------------------------------|--|
| Office Action Summary | Application No. 10/797,508 | Applicant(s) HSU ET AL. | |
| | Examiner Terry D. Cunningham | Art Unit 2816 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12/03/04 6) ☐ Other:

DETAILED ACTION

Summary of changes in this action

1. The objection to the Abstract has been overcome.
2. The Obviousness-Type Double Patenting rejection has been overcome.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-11 and 17-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soyner (USPN 5,422,603) in view of Matsui (USPN 6,3000,803). Soyner discloses, in Fig. 1, a circuit comprising: “voltage controlled oscillator (100)”; and “a phase detector (300)”.

However, the reference to Soyner fails to disclose any specific details for the broad “phase detector” 300. The reference to Matsui discloses, in Fig. 8, a specific phase detector comprising “a sampling circuits (Q11 and Q12)” and a “linear voltage-to-current converter” having “a first transconductance amplifier (Q1, Q2, Q7, Q8 and Q16)”; and “a second transconductance amplifier (Q3-Q5, Q9, Q10, Q13, Q14 and Q17)”; and “an output stages (Q6 and Q15)”. This phase detector is disclosed as having the advantage of offset compensation. Therefore, it would have been obvious for one skilled in the art to use the specific phase detector circuit of Matsui for the broad phase detector 300 of Soyner for the expected advantage of offset compensation.

Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (USPN 5,748,018) in view of Soyner and Matsui. Ishikawa discloses, in Figs. 1C and 3A, a circuit comprising: “a phase lock loop (613)”; and “a plurality of sequential elements (100 and 200)”. The reference to Ishikawa does not expressly disclose the details of the PLL circuit. The above discussed combination of Soyner and Matsui provides a circuit having offset compensation”. Therefore, it would have been obvious to use the specific PLL in the above combination to Soyner and Matsui for the broad PLL 613 in the reference to Ishikawa to obtain the expected advantage of offset compensation therein.

Examiner has fully considered Applicant’s remarks for the above rejection and has not found them to be persuasive. Contrary to Applicant’s remarks, Examiner contends that the above rejections are consistent with the cited case law and that Applicant is providing requirements that go beyond this case law. The reference to Soyner discloses a broad phase detector and the reference Matsui discloses a specific phase detector. Examiner contends that upon using the reference to Soyner, one skilled in the art would be required to use some phase detector arrangement and would look for a specific teaching. This is clearly seen to be sufficient motivation to combine. Further, Examiner finds no reason why using a specific arrangement of a circuit in place of a broad teaching of the same would lack expectation of success. Contrary thereto, Examiner contends that one skilled in the art would see expectation of success.

Examiner has not found Applicant’s remarks concerning the use of the specific PLL for the broad PLL in the combination for similar reasons as discussed above.

In the final remarks beginning on page 12, Applicant argues against the references individually. However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413,

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208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). On the contrary, the voltage-to-current circuit of the combination disclosed in the reference to Matsui will “influence the voltage” on the capacitor in the charge pump of Soyner. Further, as seen in the reference to Soyner, since the “voltage controlled oscillator” is responsive to the charge pump, such is necessarily “responsive to the voltage on the capacitor”.

Information Disclosure Statement

The references cited on the PTO-1449 have been considered, however, they have been lined through because such are not deemed to be prior art. These are clearly parent cases to the instant application.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

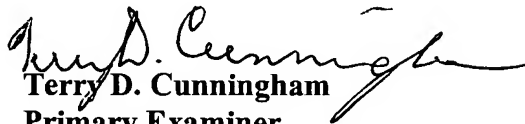
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 703-308-4872. The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for Technology Center 2800 are 703-872-9318 for Before Final communications and (703) 872-9306 for After Final communications. Please note, any faxed paper clearly stating **DRAFT** or **PROPOSED AMENDMENT** at the top will be forwarded directly to the Examiner. All others will be treated as a formal response and acted upon accordingly.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.

TC
February 2, 2005


Terry D. Cunningham
Primary Examiner
Art Unit 2816